## REMARKS

Claims 1-3 are pending. Upon entry of the present amendment, claims 1-3 and 20 will be pending, claim 1 having been amended and claim 20 added in the present amendment.

### 112, 1st Paragraph, Rejections

Claims 1-3 were rejected under 35 U.S.C. 112, 1st paragraph, as allegedly failing to comply with the written description requirement in regard to the recited "plural characteristic X-ray measuring means" and "control means." Claim 1 as presently presented renders the rejections moot. Withdrawal of the rejections is therefore requested.

### 112, 2nd Paragraph, Rejections

Claims 1-3 were rejected under 35 U.S.C. 112, 2nd paragraph, as allegedly being indefinite in regard to the recited "plural characteristic X-ray measuring means" and "control means." Claim 1 as presently presented renders the rejections moot. Withdrawal of the rejections is therefore requested.

### 103(a) Rejections

Claims 1-3 were rejected under 35 U.S.C. 103(a) as allegedly being rendered obvious by U.S. Patent No. 5,462,779 to Misiano ("Misiano"); U.S. Patent No. 5,378,506 to Imai ("Imai"); and JP 06-330318 to Matsuda ("Matsuda"). Applicants traverse the rejections.

Applicants have discovered through significant experimentation that the claimed functional roll film has excellent flexibility, gas barrier, and transparency properties in the inorganic oxide layer, the properties being stably secured together. Applicants have further discovered that a thickness ratio of the inorganic oxide layer that may be equal to or less than 1.5 unexpectedly provides these properties. If the maximum thickness is in excess of 1.5 times the minimum thickness thereof, flexibility of the thicker portion of the inorganic oxide layer decreases as compared to the thinner portion. This increases the

possibility that cracking will occur in the portion with the lower flexibility. As such, the gas barrier property degrades undesirably.

Attached Figs. 1 and 2 demonstrate the excellent gas barrier property of the claimed film, as discovered by Applicants. The gas barrier property may be determined by measuring the oxygen transmission rate (OTR: $cc/m^2 \cdot 24$ hr·atm) of the film. Applicants measured the gas barrier property between the claimed film of Example 1 (see specification, page 24) and the film of Comparative Example 1 (see specification, page 25), both using SiO as an evaporation raw material. The oxygen transmission rates of the two films were measured after SiO was evaporated (Fig. 1) and after a Gelboh test was applied (Fig. 2).

Fig. 1 shows that the film of Comparative Example 1 unpreferably increases its oxygen transmission rate with decreased film thickness as compared to the claimed film of Example 1.

Similarly, Fig. 2 shows that the film of Comparative Example 1 unpreferably increases its oxygen transmission rate with film thickness decrease as compared to the claimed film of Example 1. Moreover, the oxygen transmission rate of the film of Comparative Example 1 also increases with film thickness increase. This may be problematic because fabrication of a higher film thickness would inevitably require a lower running speed of the film at the same evaporation rate, leading to low productivity and high cost.

Applicants have discovered that the claimed film with the thickness ratio of 1.5 or less provides a preferred gas barrier property, along with flexibility and transparency, without increased production costs.

These unexpected results can not be determined from Misiano, Imai, or Matsuda, individually or in combination. Therefore, for at least these reasons, claims 1-3 are patentably over these references. Withdrawal of the rejections is therefore requested.

Claim 20 is directed to a process for producing a functional roll film, wherein the thickness ratio of an inorganic oxide layer is equal to or less than 1.5. Claim 20 also recites "a plurality of X-ray measuring means" and "a control means," which the Office Action concedes are not disclosed in the cited references. See Office Action, page 4, item 8. Hence, claim 20 is patentable over the cited references.

**CONCLUSION**

It is respectfully submitted that the present application is now in condition for allowance, which action is respectfully requested. Accordingly, Applicants request that the amendment be entered.

The Examiner is invited to contact Applicants' representative to discuss any issue that would expedite allowance of the subject application.

The Commissioner is authorized to charge any required fees or to credit any overpayment to Kenyon & Kenyon's Deposit Account No. 11-0600.

Respectfully submitted,
KENYON & KENYON

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Attachment: Figs. 1 and 2

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